Claims

1. Method for control of the circulation speed of an endless belt,

in an endless belt (17) be directed over at least tow rollers (1, 11), whereby the belt (17) is driven with a preset first circulation speed (v_1) via at least one of the rollers (1),

and in which a braking force acting directly on the endless belt (17) is generated via which the endless belt (17) is braked to a second circulation speed (v_3).

2. Method according to claim 1, characterized in that the endless belt is a photoconductor belt (22) or a transfer belt (17).

3. Method according to any of the preceding claims, characterized in that various load states act on the endless belt (17) in successive operating phases during a printing or copying process, via which various load states the belt (17) is braked with different strengths, whereby a slippage is in particular generated at the drive roller (1),

and in that the braking force is controlled such that an essentially constant slippage at the drive roller (1) is generated at least in the operating phases.

4. Method according to claim 3, characterized in that the operating phases are in particular generated via the pivoting of the endless belt (17) onto and off of a carrier material (17), the activation of a cleaning device (21) and/or the activation of charge devices (21c).

5. Method according to any of the preceding claims, characterized in that the resulting circulation speed (v_3) is the second circulation speed (v_3),

whereby the second circulation speed (v_3) is constant in all operating phases.

6. Method according to any of the preceding claims, characterized in that the endless belt (17) is directed past an electrically-conductive surface (55, 65a through 65d) aligned essentially parallel to the endless belt (17), and in that a voltage is supplied to the surface.

7. Method according to claim 6, characterized in that the applied voltage is a potential difference relative to a general ground potential.

8. Method according to any of the preceding claims, characterized in that the surface of at least one roller (1) has ground potential.

9. Method according to any of the preceding claims, characterized in that the endless belt contains at least one high-ohmic conductive layer.

10. Method according to any of the claims 6 through 9, characterized in that the voltage has a value in the range between 200 and 3000 volts, advantageously a value in the range between 400 and 1200 volts.

11. Method according to any of the preceding claims, characterized in that the braking force is adjusted with the aid of a control loop to regulate the circulation speed.

12. Method according to any of the preceding claims, characterized in that the braking force is adjusted with the aid of the level of the applied voltage.

13. Method according to any of the preceding claims, characterized in that the braking force is adjusted with the aid of a pulsed voltage according to the principle of pulse width modulation.

14. Method according to any of the preceding claims, characterized in that the braking force is controlled via changing the effective surface charged with the voltage.

15. Method according to any of the preceding claims, characterized in that a plurality of surfaces (65a through 65d) are provided arranged essentially parallel to the belt (17), which surfaces (65a through 65d) are selectively charged with a potential differing from a ground potential.

16. Method according to any of the preceding claims, characterized in that the surfaces are arranged on the inner side of the endless belt (17).

17. Method according to any of the preceding claims, characterized in that the braking force is controlled dependent on the load of the endless belt (17) caused by operating states, whereby the braking force is controlled dependent on control points in time.

18. Arrangement for controlling the circulation speed of an endless belt,

with an endless belt (17) that is directed over at least two rollers (1, 11),

with a drive unit that drives the belt (17) with a preset first circulation speed (v_1) via at least one of the rollers (1),

and with a braking unit that generates a braking force that acts directly on the belt, via which braking force endless belt (17) is braked to a second circulation speed (v_3).

19. Arrangement for generation of a braking force on an endless belt,

in which an electrically-conductive surface (55) is arranged essentially parallel to the endless belt (17),

and in which the surface (55) for generation of the braking force applies a voltage to the surface.

20. Arrangement according to claim 19, characterized in that the endless belt (17) is directed towards the surface (55) in a range between zero and five millimeters.

21. Arrangement according to claim 18 or 19, characterized in that the surface has essentially the same width as the endless belt.

22. Arrangement according to claim 19, 20 or 21, characterized in that the surface is a metallic surface (55) or a surface formed from electrically-conductive plastic.